

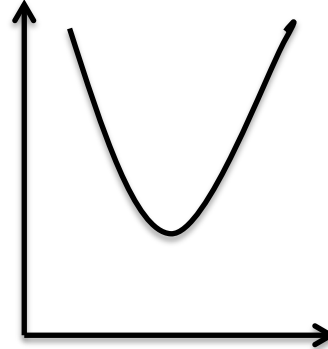
Name: _____ Date: _____ Period: _____

Unit 6 Test Form A

40

Determine whether each relation is a function. Explain, or show, why or why not in one sentence. (2 points each)

$(8, 4)$ $(0, 4)$ $(9, 3)$ $(8, -2)$ $(2, -1)$

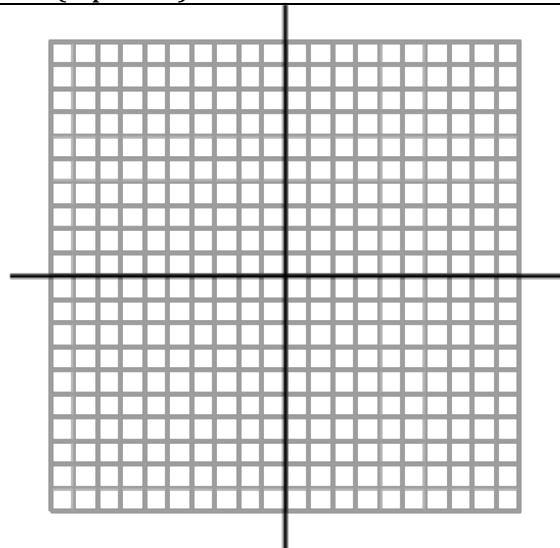
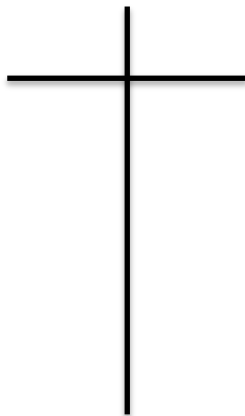


Find the range from the given domain $\{-2, 0, 2, 5\}$. (2 points)

$$f(x) = -3x - 2$$

Create a table of values and graph the function. (2 points)

$$f(x) = 2x - 4$$



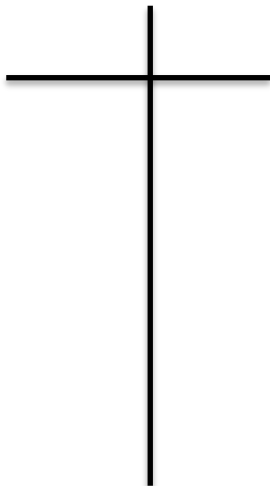
Situation. Suppose a town has a population that is increasing by 50 people each year.

Write a function rule to describe this relationship. (3 points)

Let ____ = _____ Let ____ = _____

Equation: _____

Model the function with a table of values and a graph. (2 points)



Find the constant of proportionality in each equation. (2 points)

$$y = 2x$$

$$y - 7x = 0$$

Write an equation of the direct variation that includes the point (6, 12). (1 point)

For the table, tell whether y varies directly with x. If it does, write an equation for the direct variation. (2 points)

x	y
-1	4
0	0
2	-8
3	-12

Direct Variation: **yes** or **no**

Equation: _____

The amount of money raised at a charity fundraiser is directly proportional to the number of attendees. The amount of money raised for five attendees was \$100. How much money will be raised for 60 attendees? (2 points)

If y varies directly with x, when x = 4 and y = -8, find x when y = 10. (1 point)

If y varies inversely with x when x = -2 and y = -10, find y when x = -5. (1 point)

Determine if each equation is direction variation, inverse variation, or neither. (4 points)

$$y = 3x$$

$$y = \frac{-4}{x}$$

$$y = 2x - 3$$

$$y - 2x = 0$$

Decide if each data set represents a *direct variation* or an *inverse variation*. **Then**, write an equation to model the data. (4 points)

x	y
3	-9
-2	6
-4	12

x	y
-7	-4
4	7
-2	-14

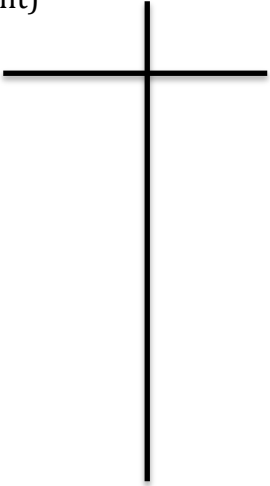
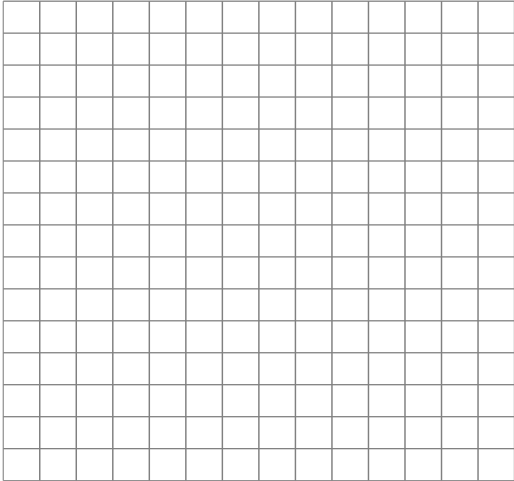
direct variation **OR** inverse variation

direct variation **OR** inverse variation

equation:

equation:

Find the constant of variation k for the inverse variation. (2 points)	
(4, -2)	$x = 2$ when $y = 3.5$

<p>Situation: When a plumber is called, the cost of the service call is \$50 for him to show up at your house, plus an additional \$25 per hour.</p>	
<p>Write a function rule to describe this relationship. (3 points)</p> <p>Let ____ = _____ Let ____ = _____</p> <p>Equation: _____</p>	
<p>Create a table of values. (1 point)</p> 	<p>(1 point)</p> 
<p>If you need the plumber to stay for 6 hours, how much should you expect to pay him? (1 point)</p>	
<p>The plumber demanded \$150. How many hours was he at your house for? (1 point)</p>	
<p>Tell me one thing you are excited to do during spring break. (1 point)</p>	

